



Orion LTTM

Wind Monitor

Wind Speed | Wind Direction | Ultrasonic Technology



www.columbiaweather.com



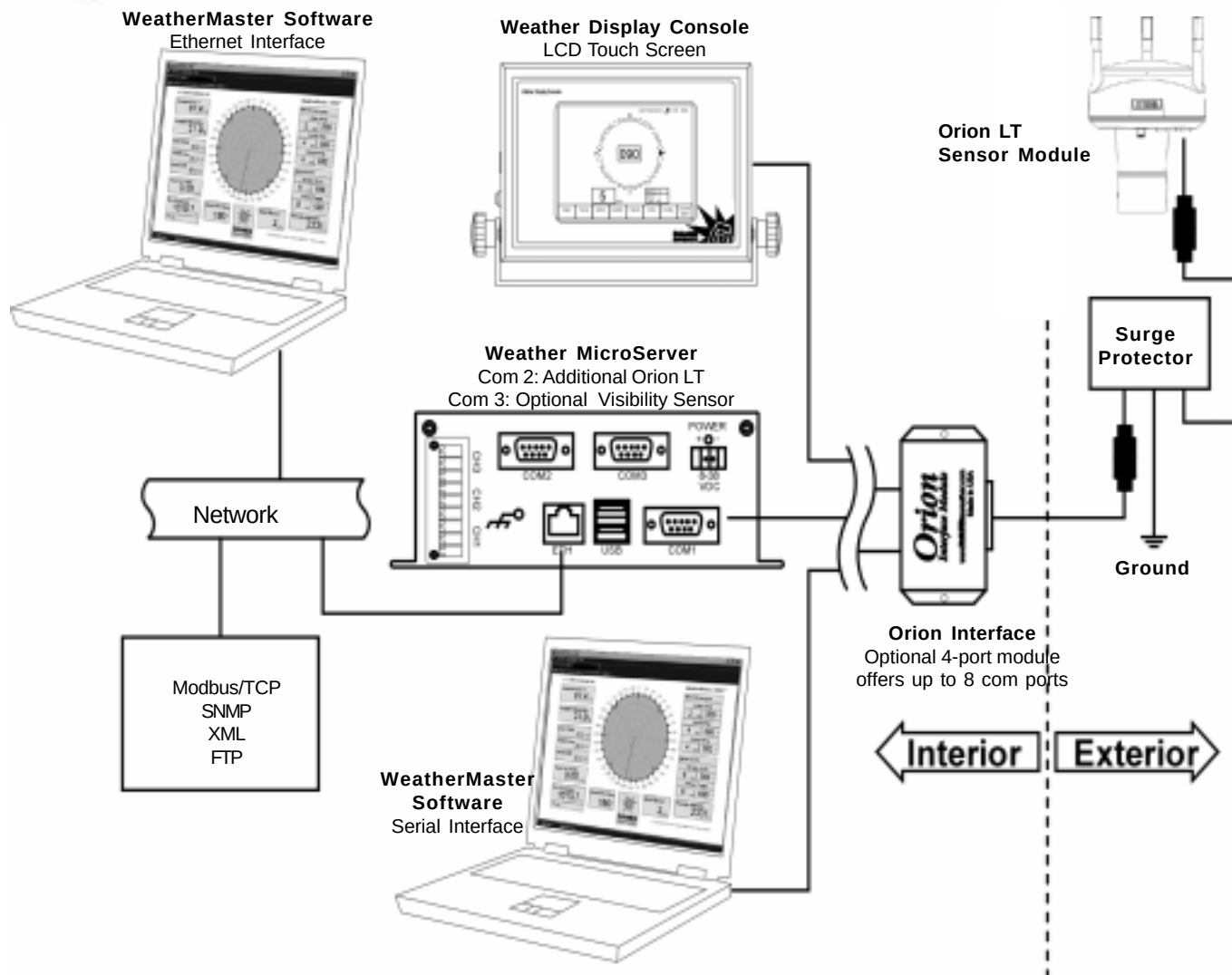
Innovative Wind Measurement

The Orion LT Wind Monitor™ includes high-tech, ultrasonic wind direction and speed measurements. High accuracy and fine resolution make this system ideal for precision wind monitoring.

Available in three configurations – **fixed-mount, vehicle-mount, and portable** – Orion LT data can be monitored with our proprietary Weather Display Console and/or WeatherMaster™ Software.

Orion LT Wind Monitors Feature:

- Triangular design ensures excellent data availability and 360° measurement accuracy
- No moving parts make it superior to conventional mechanical wind sensors
- Easy to install and requires no field calibration or maintenance
- Low power requirements improves reliability and longevity
- Perfect for solar or battery-powered applications
- Compact and robust sensor in durable, corrosion-resistant housing
- Starting threshold for both wind speed and direction is virtually zero
- Heated model is available
- Optional Weather MicroServer for Internet-ready data and Industrial interfaces
- LCD touch-screen display console and powerful software options



Orion LT™

Wind Monitor

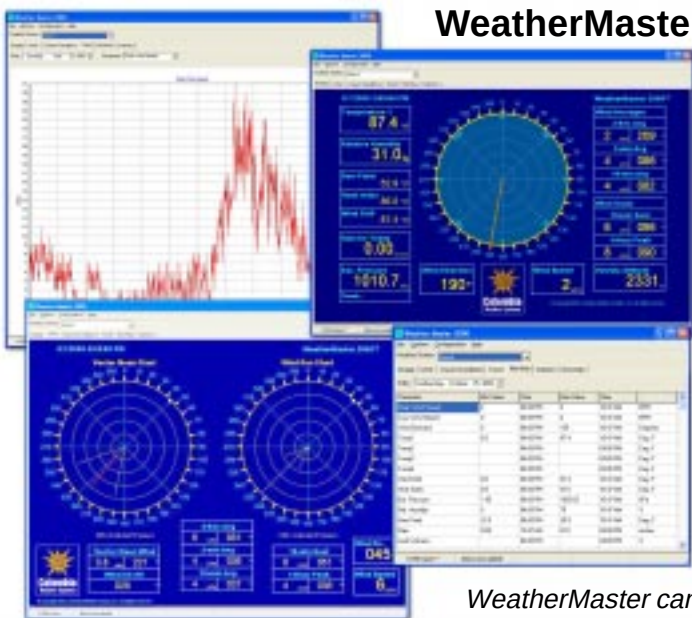
Weather Display Console™

The Weather Display Console uses "intelligent" touch-screen technology. With its programmable microprocessor and abundant memory, the console displays weather information on five weather viewing screens, performs complex computations, and stores relatively large amounts of weather data.

The Weather Display Console features a graphic LCD (320 x 240 pixels) having a luminescent white background with blue text and images for legibility. The screens are designed to be viewed clearly from a distance.

The display console is flexible and can be factory-programmed to suit specific market and industry requirements. It is available in three mounting options:

- Desktop/Wall-Mount
- Panel Mount/Flush Mount
- 19" Rack Mount



WeatherMaster™ Software

This professional-grade software is designed to optimize the capabilities of Orion Weather Stations. Providing real-time computer weather monitoring, WeatherMaster offers:

- Display and automatic logging of all measured and calculated parameters
- Downwind vector wind and wind character-plotting screens
- An open Microsoft Access® database for archival with easy retrieval and compatibility with other Windows® programs
- On-the-fly graphing and trend display of all parameters
- Alarm notification via computer, email, pager or cell phone
- Multi-station monitoring and data acquisition
- Quick-North orientation
- Interface with CAMEO/ALOHA software for plume modeling and evacuation corridor predictions

WeatherMaster can be customized to meet specific industry requirements.

Weather MicroServer™

The Weather MicroServer is a self-contained, proprietary computer utilizing an embedded Linux operating system. It creates an "Internet-ready" weather monitoring system by automatically providing FTP output, XML web service, and Internet browser user interface.

SNMP and Modbus/OPC communication protocols are standard for Industrial Management applications.

The Weather MicroServer has datalogging capability. It connects to your network with an included Ethernet cable.

Two serial ports offer interface to both the Weather Display Console and additional peripheral devices or sensors such as visibility and solar radiation.

The Weather MicroServer can provide real-time weather data to WeatherMaster Software over the network. This allows users to simultaneously monitor the weather using WeatherMaster on any network computer.



Weather MicroServer Optional Sensors:

The **visibility** sensor measures atmospheric visibility (meteorological optical range) by determining the amount of light scattered by particles (smoke, dust, haze, fog, rain, and snow) in the air that pass through the optical sample volume. A 42-degree forward scatter angle is used to ensure performance over a wide range of particle sizes.

The pyranometer or **solar radiation** sensor measures the shortwave radiation reaching the Earth's surface.

The self-cleaning convex lens measures even low-angle radiation directly from the sun in the morning and evening. The dome-shaped head prevents water accumulation.



Sensor Specifications

Wind Speed

Range: 0 - 135 mph (0 - 60 m/s)

Accuracy: ± 0.7 mph (± 0.3 m/s)

Resolution: 1 mph (1 m/s)

Units Available: knots, mph, km/hr, m/s

Wind Direction

Azimuth: 0 - 360°

Accuracy: $\pm 3^\circ$

Resolution: 1°

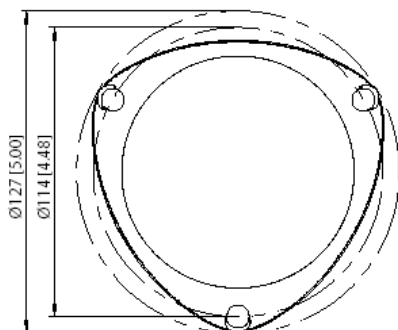
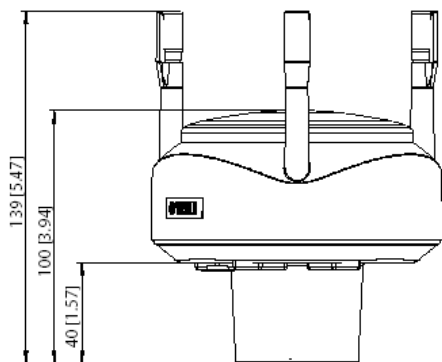
Dimensions

Height: 139 mm (5.17")

Diameter: 127 mm (5.00")

Weight: 510 g (1.12 lbs)

Housing: IP65



Orion LT™ Wind Monitor

Wind Measurements

Wind speed and direction are measured using advanced ultrasonic technology. Three equally-spaced ultrasonic transducers on a horizontal plane ensure accurate wind measurement from all directions, without blind angles or corrupted readings.

System Configurations

Orion LT wind monitors are available in Fixed-Mount, Vehicle-Mount and Portable system configurations.

All systems include the Orion Interface Module with dual communication ports and the Orion LT Transmitter Module with ultrasonic wind speed and direction sensor with alignment adapter

Fixed-Mount Weather Stations include 50-ft sensor cable and 7-foot RS-232 cable. Optional accessories:

- Sensor mast and mounting hardware options
- Extra cable length
- Wireless Transceivers

Vehicle-Mount Weather Stations include a detachable 8-ft telescoping sensor mast and mounting hardware.

Portable Weather Stations include wireless transceivers, batteries, transportation case and tripod with telescoping mast.

Please contact us for a free quotation!



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